

Application/ Control No.: 10/624,002
Examiner: GOLOBOY, James C

REMARKS

In paragraph 2 of the Office Action, claim 14 was objected to because of the spelling of alkyldiphenyl. This error been corrected by this Amendment.

In paragraph 3 of the Office Action, claims 1, 3, 7 and 11-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yokouchi in view of Birke.

Reconsideration is requested.

Claim 1, has been amended to point out that the grease composition of the present invention does not contain ester oil. This amendment limits what may be in the base oil component. This amendment is supported by the specification, as filed, at page 6, line 16 where the ester oil is described as an optional oil component. For this reason, the exclusion of this optional component is not new matter.

Claim 14 has been amended to point out that the base oil consists only of alkyldiphenyl ether oil as pointed out in the specification at page 7, line 3. In claim 15, the description of the base oil has been revised to point out that the base oil is 80% by weight of alkyldiphenyl ether oil and 20% by weight of synthesized hydrocarbon oil. This amendment is supported by the disclosure of a base oil in Example 8 of the specification where 80% by weight is alkyl diphenyl oil and 20% by weight is synthesized hydrocarbon oil.

The Yokouchi patent does not disclose a grease composition which comprises sodium sebacate. In addition, the base oil of Yokouchi contains as ester oil as an essential

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component, whereas the base oil of the present invention, as defined by the amended claims of the present application excludes an ester oil. The presence of an ester oil in a grease composition adversely affects the properties of the grease.

Birke lists disodium sebacate as an example of a grease additive but does not disclose nor suggest that a grease containing 0.5 to 5 parts by weight of sodium sebacate in the nitrate free grease composition. The amended claims define a grease composition which comprises a thickener consisting of 100% aromatic diurea and a base oil consisting of 20% parts by weight or more of alkyldiphenyl ether oil but not containing ester oil. The test data of record points out that the claimed grease composition when used with a sealed bearing provides excellent results in the high-temperature and high-speed test, the sudden acceleration/deceleration test, and the rust preventive test.

As is apparent from the comparative example 8 of the Mikami declaration filed April 16, 2007 and original example 8 of the specification, the presence of disodium sebacate has an unexpected effect on the high temperature/high speed test where the time to failure is about seven times longer for the disodium sebacate containing grease as compared to the same grease that does not contain disodium sebacate.

Yokouchi specifically teaches, in comparative example 2, that a grease composition which comprises a polyether oil which does not contain an ester oil has poor grease properties. Therefore, there would have been no motivation to replace an ester oil with a polyether oil not containing an ester oil, because according to Yokouchi, this would produce inferior results. As such, it would not be obvious to modify the Yokouchi composition by deleting the ester oil. Furthermore,

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Yokouchi also fails to disclose a grease composition which comprises sodium sebacate. Since Yokouchi lacks all the elements of the amended claims, it fails to render them obvious.

Birke fails to disclose or suggest adding 0.5 to 5 parts by weight of sodium sebacate to a nitrate free grease composition which comprises a thickener consisting of 100% aromatic diurea and a base oil consisting of 20% parts by weight or more of alkyldiphenyl ether oil. This combination of components allow the composition, as pointed out in claims 1 and 14 to have excellent results in high-temperature and high-speed tests.

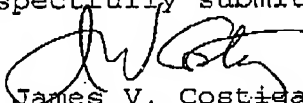
The Birke reference, alone or in combination with Yokouchi, also fails to render amended claims 1 and 14 obvious because neither Yokouchi nor Birke provide any guidance as to how much sodium sebacate could be used and do not indicate the enhanced properties resulting from its use in conjunction with the other components defined by the amended claims.

It is apparent from the working examples, the comparative examples, and the declared data, found in the present application that the composition defined in the amended claims provides excellent results in high-temperature and high-speed tests, sudden acceleration/deceleration tests, and rust preventative test. These properties are due to the unique combination of components and their specific inclusion ratios that are defined in the amended claims. The cited prior art fails to point out either of these factors. As noted above, both Yokouchi and Birke fail to provide the specific range of sodium sebacate to be used. Furthermore, Yokouchi teaches away from using an ester free oil. As such, it is clear that the amended claims are not made obvious by the cited prior art.

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Favorable consideration and early allowance are respectfully requested and earnestly solicited.

Respectfully submitted,



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